

# water ILLUSTRATED

Get  
**WaterWise**

Have some  
**H<sub>2</sub>O Fun!**

Make Every  
**Drop Count**



**How Safe**  
is our water?

2008 **WATER QUALITY REPORT**  
City of College Station, Texas  
Home of Texas A&M University



# WaterWise

Get answers to these  
**common questions**

## Where does my water come from? How is it treated?

College Station relies entirely on groundwater for its drinking water supply. Water is pumped from seven deep wells drilled in the Simsboro Sand, which is approximately 3,000 feet deep in the Carrizo-Wilcox Aquifer group. Because of this depth, the water temperature is 118° Fahrenheit when it is pumped from underground. Cooling towers at the Sandy Point Pump Station reduce the temperature to about 85° Fahrenheit.

The groundwater travels approximately 13 miles from Sandy Point Pump Station to the Dowling Road Pump Station, where we add chlorine to disinfect the water and fluoride for dental health. Ground storage tanks at Dowling Road provide a total of 8 million gallons of water storage for high demand periods.

After the water is disinfected, it is ready to go into the distribution system, which includes two elevated storage tanks. The elevated storage tanks are what provides water pressure and provide additional water storage for peak demand periods and for fire protection.

## I have a weakened immune system. What should I know about drinking water?

**If you have a weakened immune system, you may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or local health care provider.**

**Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the EPA's Safe Drinking Water Hotline at 800-426-4791 or online at [www.epa.gov/safewater](http://www.epa.gov/safewater).**

## What are other sources of drinking water?

The sources of drinking water (both tap water and bottled water) include

rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

## If my water looks dirty or "rusty," is it safe to drink?

Contaminants may be found in drinking water that may cause taste, color, or odor problems. Occasionally water may become discolored due to a water line break. These types of problems are not necessarily causes for health concerns. If you experience discolored water, please report it to Utility Dispatch (24 hours) at 764-3638 so that we may promptly correct the problem.

For more information on taste, odor, or color of drinking water, please contact College Station Utilities at 979-764-3660.







## A Note About Bottled Water...

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

For more information about contaminants and potential health effects, call the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Food and Drug Administration (FDA) regulations establish limits for bottled water which must provide the same protection for public health as the EPA's limits. When drinking water meets all Federal and State standards, as it does in College Station, there may not be any health-based benefits to purchasing bottled water or point-of-use devices.

## What substances are tested for in my water?

The State of Texas requires College Station to monitor your drinking water for over 100 different contaminants. Depending on the contaminant and regulations for that contaminant, the monitoring schedule could be monthly, quarterly, annually and in some cases less frequently. Below are some of the substances College Station's water is monitored for, and how often.

Contaminant	Schedule	Last Sample	Next Sample
Total Coliform Bacteria	Monthly	2008	2009
Disinfectant Residual	Quarterly	2008	2009
Disinfection Byproducts	Annually	2008	2009
Nitrates, Minerals, Radioactivity	Every 3 years	2008	2011
Lead & Copper	Every 3 years	2007	2010

The table below lists amounts of other substances for which College Station's water is tested. The Secondary Maximum Contaminant Levels (SMCL) are not enforced, but rather are intended as guidelines.

Substance	Date Sampled	Detected Levels	Limit
Alkalinity (Bicarbonate)	2008	431 mg/L	No recommendation
Alkalinity (Carbonate)	2008	<1 mg/L	No recommendation
Alkalinity (Phenolphthalein)	2008	<1 mg/L	No recommendation
Alkalinity (Total)	2008	353 mg/L	No recommendation
Chloride	2008	51 mg/L	250
Fluoride	2008	0.32 mg/L	2.00
pH	2008	8.3	> 7.00
Diluted Conductance	2008	882 µmhos/cm	No recommendation
Sulfate	2008	12 mg/L	300
Total Dissolved Solids	2008	489 mg/L	1,000



### COLLEGE STATION UTILITIES WATER SERVICES

David Coleman **Director**  
Jennifer Nations **Water Resource Coord.**

#### CITY COUNCIL\*

Ben White **Mayor**  
John Crompton **Place 1**  
James Massey **Place 2**  
Dennis Maloney **Place 3**  
Lynn McIlhaney **Place 4**  
Lawrence Stewart **Place 5**  
David Ruesink **Place 6**

Glenn Brown **City Manager**  
Kathy Merrill **Assistant City Manager**  
David Neeley **Assistant City Manager**

\*as of May 2009

### Assessing College Station's Source Water

A Source Water Susceptibility Assessment for College Station's drinking water sources is currently being updated by the Texas Commission on Environmental Quality and will be provided to College Station later this year. The report will describe the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment will allow us to focus our source water protection strategies. For more information on source water assessments and protection efforts in College Station, please contact Jennifer Nations at 979-764-6223 or [jnations@cstx.gov](mailto:jnations@cstx.gov).

### How much sodium is in my drinking water?

College Station's drinking water has approximately 200 milligrams of sodium per liter. Sodium is a naturally-occurring characteristic of our source water.

### What is the hardness of my water, and why can't I get the soap out of my hair!?

Hardness in water is caused by the presence of calcium and magnesium. College Station's water has a hardness of 8.14 mg/L (0.48 grains per gallon) and is considered "soft" (0 to 75 mg/L CaCO<sub>3</sub>). Soft water makes suds and cleans very easily, so you can get by with using a lot less soap and detergent.



# Make Every Drop Count

In an effort to conserve our limited drinking water, the City of College Station has introduced new water conservation rates and incentives. In October 2008, inclined block water rates were implemented to encourage efficient water consumption.

The City has also adopted a watering schedule based on the last digit in a customer's address. The schedule is broken into three groups: commercial/multi-family properties, **residential-even** numbered addresses, and **residential-odd** numbered addresses.

Customers	Recommended Watering Day(s)
Commercial / Multi-family	Monday and/or Friday
<b>Residential-Even</b> Numbered	Tuesday and/or Saturday
<b>Residential-Odd</b> Numbered	Thursday and/or Sunday

To learn more, go to [www.cstx.gov/water](http://www.cstx.gov/water) or contact Water Resource Coordinator Jennifer Nations at 979-764-6223 • [jnations@cstx.gov](mailto:jnations@cstx.gov) or Water Auditor Camden White at 979-764-6344 • [cwhite@cstx.gov](mailto:cwhite@cstx.gov).

## Wouldn't a fixed rate increase for all College Station water customers be more fair?

The City of College Station reviewed the option of a straight rate increase, and in the past this is how rate increases were implemented. In order to bring in revenue required for operations, maintenance, additional capacity, and debt service, a 14% rate increase would have been needed.

More than half of College Station's residential single family water customers use 15,000 gallons of water or less each month. These customers will have a very minimal increase, if at all,

under the inclining rate structure. By contrast, fewer than 1,000 residential single-family accounts consistently use 26,000 gallons or more each month. A flat across the board increase would disproportionately affect customers with lower water usage.

## What happens if the new water rates bring in more revenue than expected?

The rate structure is expected to increase water revenues up to approximately \$12.2 million. This increase is needed for capital cost of additional water supply capacity. If the rate structure brings in more revenue

than expected, the recommended use for additional revenue is to pay down existing debt. This will mitigate the effect of future rate increases.

## What about my homeowners association requirements?

Many homeowners associations (HOAs) in College Station do require homes to have in-ground sprinkler systems and have certain standards for yard maintenance. However, with proper management and sustainable landscaping practices, it's possible to have a beautiful yard without an excessive water bill.

(next page)



### What about my business?

The inclined block rate schedule only applies to residential single-family and duplex customers. HOA common areas, apartment complexes, and businesses pay the \$2.44 per 1,000 gallons rate.

### Aren't there other sources of water available?

A recent study completed by HDR Engineering for College Station concluded that the most cost-effective and feasible source of water continues to be groundwater, and conservation of that groundwater. Our 7<sup>th</sup> groundwater well is now in service and we have submitted permit applications to the Brazos Valley Groundwater Conservation District for two more wells. Other alternative water sources, such as river water or surface reservoir, are either not available to College Station or prohibitively expensive when compared with other alternatives.

Large scale reductions in the demand for drinking water will be achieved through the City's reclaimed water project, which will bring recycled water to Veterans Park and other large irrigation users. Regardless of which water source is used, efficient use of that resource is essential to ensuring a long-term, viable water supply in College Station.

### We've had rain. Why do the rates still need to be increased?

Several factors combine to increase the cost to operate and maintain the water system. Increased security requirements, fuel and material cost increases, Brazos Valley Groundwater Conservation District regulations, as well as general inflation, all contribute to rising operating costs. Capital costs to increase water system capacity to meet peak water demand during irrigation season have also risen dramatically.

Groundwater sources in our region are nearly at their maximum level of permitted withdrawal, and conservation is essential to keep demands within our system capabilities. The residential rate structure of inclined block rates is designed to promote water conservation.

### How do the conservation rates work?

The table below shows the rate per 1,000 gallons for all customer classes.

Type	Usage (Gallons)	Water Rate as of October 1, 2008
Residential	0 to 10,000	\$2.22
	11,000 to 15,000	\$2.88
	16,000 to 20,000	\$3.54
	21,000 to 25,000	\$4.20
	26,000 and up	\$4.86
Commercial	All Usage	\$2.44 (10% increase)
Service Fees		10% increase

The table below shows costs for a residential water bill of 12,000 and 30,000 gallons.

Usage (Gallons)	Rate per 1,000 Gallons	Sample Bill: 12,000 Gallons		Sample Bill: 30,000 Gallons	
0 to 10,000	\$2.22	\$2.22 × 10	\$22.20	\$2.22 × 10	\$22.20
11,000 to 15,000	\$2.88	\$2.88 × 2	\$5.76	\$2.88 × 5	\$14.40
16,000 to 20,000	\$3.54	\$3.54 × 0	\$0.00	\$3.54 × 5	\$17.70
21,000 to 25,000	\$4.20	\$4.20 × 0	\$0.00	\$4.20 × 5	\$21.00
26,000 and up	\$4.86	\$4.86 × 0	\$0.00	\$4.86 × 5	\$24.50
		Meter Charge:		\$9.99	
		Total Water Bill:		\$37.95	
				\$109.59	



# How **safe** is our **water** ????

**College Station water is VERY safe!** Independent laboratories certified by the EPA and State of Texas perform all required testing. All substances detected in routine testing are detailed below. All are below the Maximum Contaminant Level (MCL) and do not exceed the health-based standards for drinking water.

## INORGANIC CONTAMINANTS

Year Sampled	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Violation (Y or N)	Possible Source of Contaminant
2008	Fluoride	0.32 ppm	0.32 ppm	0.32 ppm	4 ppm	2 ppm	N	Water additive to promote strong teeth; erosion of natural deposits
2008	Nitrate	0.05 ppm	0.05 ppm	0.05 ppm	10 ppm	10 ppm	N	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits

## DISINFECTANT RESIDUAL

Year Sampled	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Violation (Y or N)	Source of Disinfectant
2008	Chlorine	1.66 ppm	1.21 ppm	2.17 ppm	4 ppm	N/A	N	Water additive to control microbes

## DISINFECTION BY-PRODUCTS

Year Sampled	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Violation (Y or N)	Source of Contaminant
2008	Total Trihalomethanes	18.2 ppb	18.2 ppb	18.2 ppb	80 ppb	N/A	N	Byproduct of drinking water disinfection
2008	Haloacetic Acids	1.7 ppb	1.7 ppb	1.7 ppb	60 ppb	N/A	N	Byproduct of drinking water disinfection

## COLIFORMS

Year Sampled	Contaminant	Highest Monthly % of Positive Samples	MCL	MCLG	Violation (Y or N)	Possible Sources of Contaminant
2008	Total Coliform Bacteria	1.82 %	*	0	N	Naturally present in the environment

\*presence of Total Coliform Bacteria in  $\geq$  5% of samples in one month

## LEAD AND COPPER\*\*

Year Sampled	Contaminant	90th Percentile	Sites Exceeding Action Level	Action Level	Violation (Y or N)	Possible Source of Contaminant
2007	Lead	2.1 ppb	2	15 ppb	N	Corrosion of household plumbing systems; erosion of natural deposits
2007	Copper	0.127 ppb	0	1.3 ppm	N	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

\*\* The Lead and Copper results in this year's report are based on 30 samples collected for the last monitoring, in August 2007. The next round of lead and copper sampling will occur in 2009. The 90<sup>th</sup> Percentile based on these samples is 2.1 ppb for lead and 0.127 ppm for copper. 90% of College Station tap water samples collected were at or below these levels. EPA considers the 90th percentile the same as an "average" value for other contaminants. If more than 10% of tap water samples collected exceed the action level for lead or copper, water systems must take additional treatment measures.

# Have Some H<sub>2</sub>O Fun!

These activities are part of the Texas Water Development Board's "Major Rivers" water education curriculum. To bring this FREE curriculum to your 4<sup>th</sup> or 5<sup>th</sup> grade classroom, contact Jennifer Nations at 979-764-3660 or [jnations@cstx.gov](mailto:jnations@cstx.gov).

**Directions: Read each item. Fill in the blank spaces with the words listed below.**

• surface water

• water treatment plants

• pipelines

• reservoirs

• wastewater treatment plants

• groundwater

• recycled water

1. Dirt and germs are removed from water at \_\_\_\_\_.

2. Water is delivered to homes through \_\_\_\_\_.

3. Large amounts of surface water are stored in \_\_\_\_\_.

4. Sewage is cleaned at \_\_\_\_\_.

5. Cleaned wastewater that is used to water grass and some crops is called \_\_\_\_\_.

6. Water we pump out of aquifers is called \_\_\_\_\_.

7. Water from rivers, reservoirs and lakes is called \_\_\_\_\_.

**Directions: Trace Major Rivers and Aquifer through the maze. Stop at each water distribution point and unscramble the words to show where Major Rivers is.**

ecafrus wraet

1. \_\_\_\_\_

rrreesiov

2. \_\_\_\_\_

tawre ttrnaetme tnalp

3. \_\_\_\_\_

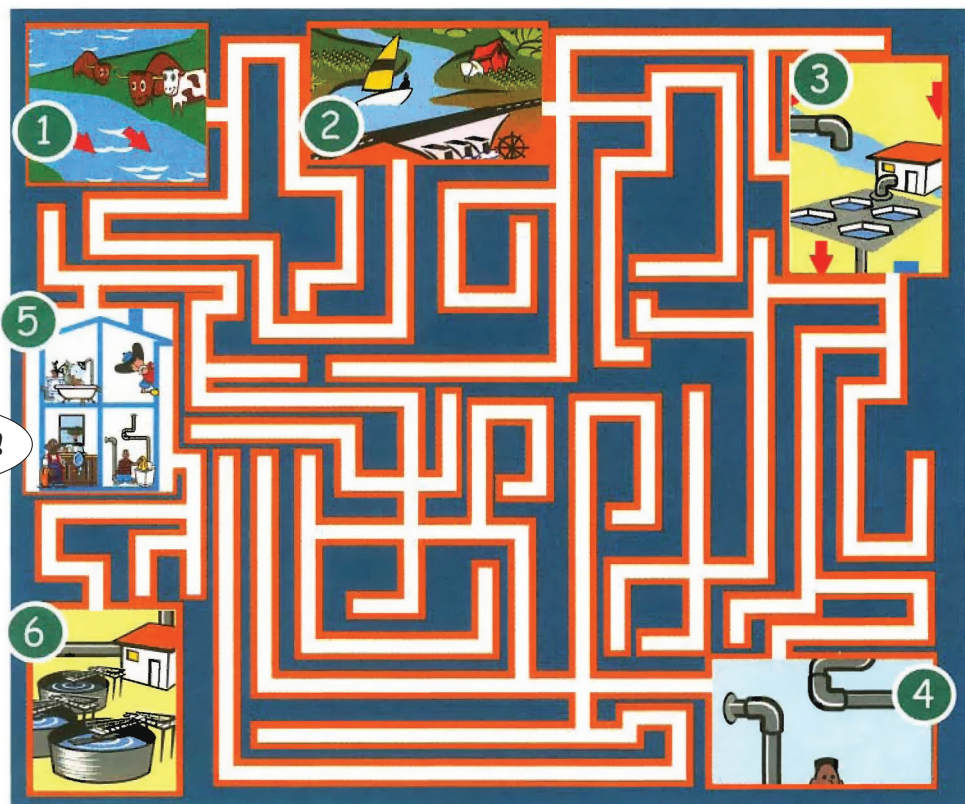


mohe

5. \_\_\_\_\_

etsawretaw rtntaetme  
pntla

6. \_\_\_\_\_



epipsenil

4. \_\_\_\_\_





## College Station Utilities

Reliable, Affordable, Community Owned

P.O. Box 9960  
1601 Graham Road  
College Station, TX 77842

PRSRT STD  
U.S. POSTAGE  
PAID  
Delucia Mail  
Service 77801

### CITY OF COLLEGE STATION Quick Reference Guide

#### CITY SECRETARY

Birth/Death Certificates, Public Records Requests  
(979) 764-3500

#### NOTICE of MEETINGS

City Council - 2nd & 4th Thursday each month,  
Planning & Zoning, Committees  
(979) 764-3500 [www.cstx.gov](http://www.cstx.gov)

#### UTILITY CUSTOMER SERVICE

Bill pay, connect / disconnect utilities  
(979) 764-3535, 1-800-849-6623

[www.epay.cstx.gov](http://www.epay.cstx.gov)

Line breaks, sewer backups, power outages

(979) 764-3638 [24-hrs]

#### WATER CONSERVATION

Presentations, field trips, conservation tips  
(979) 764-6223

**EN ESPAÑOL:** Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (979) 764-3502.

## Water Words & Definitions

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements a water system must follow.

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the maximum contaminant level goals as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Micromhos per centimeter:** A measure of the electrical conductivity of a water sample. Pure water has a conductivity of 0.005 micromhos per centimeter at 25° Celsius.

**Parts per billion (ppb):** One microgram per liter.

**Parts per million (ppm):** One milligram per liter (mg/L).

**pH:** The pH scale extends from 0--very acidic, to 14--very alkaline or basic. A pH of 7 is neutral. Most natural waters fall within the range of 4 to 9.

**Secondary Maximum Contaminant Level (SMCL):** The level of a contaminant that represents reasonable goals for drinking water quality. SMCLs pertain to contaminants that primarily affect the aesthetic qualities relating to drinking water.